IN THE SPECIFICATION (as originally filed):

Page 1, immediately following the title, please insert the following:

CROSS REFERENCE TO RELATED APPLICATION

This is the U.S. national phase of International Application No. PCT/DE03/01002 filed March 26, 2003, the entire disclosure of which is incorporated herein by reference.

BACKGROUND OF THE INVENTION

The heading on page 1, line 4 has been changed as follows:

~~Description:~~ Field of the Invention

The paragraphs beginning on page 1, line 5 have been changed as follows:

The invention is concerned with a ~~procedure~~ method and device to assess deformation ~~during which they are determined. Subject of the invention is~~ of a body by a precise examination of how an influx of energy due to loading causes a deformation.

~~Furthermore, the invention concerns a mechanism which is suited for the implementation of the procedure.~~

On page 1, line 11 please insert a headings as follows:

Related Technology

The paragraphs beginning on page 2, line 4 have been changed as follows:

Further developments to the kinematics of deformation have been presented in the article "An approach to deformation theory based on Boyle's law. II. Kinematics of simple shear, and some energetic considerations["]."

The necessity to consider a full deformation in three dimensions even for very simple geometric setups is explained in the article "An approach to deformation theory based on Boyle's law. III. Three-dimensional properties of plane-strain deformation: origin of conjugate joint sets, sheath folds in plastic shear zones, and turbulence in viscous flow["]."

On page 2, line 12 please insert a heading as follows:

GENERAL DESCRIPTION

The paragraph beginning on page 2, line 13 has been changed as follows:

~~Subject of the~~ The invention ~~is the task to develop~~ develops a general method to the point where it delivers solutions to specific tasks as quickly and ~~reliable~~ reliably as possible.

The paragraph beginning on page 4, line 13 has been changed as follows:

The invention thus ~~consists of~~ presents a method to assess deformation of a body whereby it is the main concern how the action of forces affect the body. It is done in such a way that the equilibrium between internal and external forces is established as a function of material properties, external boundary conditions, and the existence of bonding forces between system and surrounding, both for a representative part of the body, and for the body as a whole. The material properties must be known as a function of the location $Q(x_i)$. Likewise, the configuration of the external boundary conditions (properties of the external force field) must be known.

On page 5, line 7 please insert a heading as follows:

BRIEF DESCRIPTION OF THE DRAWINGS

On page 8, line 17 please insert a heading as follows:

DETAILED DESCRIPTION

The paragraph beginning on page 8, line 24 has been changed as follows:

The invention comprises four parts:

the definition of a scale-independent unit volume with a shape that fulfils the equilibrium conditions,

the definition of two force fields which are in equilibrium with one another,

the determination of a material-independent equation of state for solids, and,

the transformation of the equation of state from scalar form into vector form.

The line on page 19, line 26 has been deleted as follows:

~~Figure 5 here~~

Equation 46, page 24, line 16 has been changed as follows:

$$\sqrt{\left|\mathbf{f}_{s(\text{dextral})}\right| - \left|\mathbf{f}_{s(\text{sinistral})}\right|} = \tan\lambda; \quad \lambda = 28[,]\underline{]}.83° \qquad \text{(eqn.46)}$$

IN THE ABSTRACT:

Please add an abstract as follows:

A method for determining deformations of a body by which the effect of forces on the body is analyzed, including determining the way an equilibrium of forces between internal and external forces for a whole body or a part of it dependent on the material properties and

the external boundary conditions comes about, by determining the deformations such that all acting forces are represented by the formula

$$\mathbf{f}_{ext} + \mathbf{m}_{syst} + \mathbf{m}_A + \mathbf{f}_{s(ext)} + \mathbf{m}_{s(syst)} = 0.$$